

REMARKS/ARGUMENTS

I. Introduction:

Claims 4, 6, 12, 16, 17, 18, 19, 20, 24, 26, 27, and 28 are amended and claims 13, 15, and 21 are canceled herein. With entry of this amendment, claims 1-12, 14, 16-20, and 22-29 will be pending.

II. Claim Objections:

Claims 4-10, 13, 16-17, 20-21, and 26-29 were objected to as being dependent upon a rejected base claim, but allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4 and 6 have been amended to include base claim 1 and intervening claims 2 and 3. As amended, claims 4 and 6 are believed to be in proper form for allowance. Claims 5, 9, and 10, depending from claim 4, and claims 7 and 8, depending from claim 6, are also submitted as being in proper form for allowance.

Claim 12 has been amended to include the limitations of dependent claim 13 and is believed to be in proper form for allowance.

Claims 16 and 17 have been amended to include base claim 15 and are submitted as being in proper form for allowance.

Claim 19 has been amended to include the limitations of dependent claim 21 and claim 20 has been amended to include the limitations of base claim 19. As amended, claims 19 and 20 are believed to be in proper form for allowance. Claims 22 and 23, depending from claim 19, are also submitted as being in proper form for allowance.

Claims 26, 27, and 28 have been amended to include the limitations of base claim 24 and are submitted to be in proper form for allowance. Claim 29 depends from claim 28 and is also believed to be in proper form for allowance.

III. Claim Rejections Under 35 U.S.C. 102 and 103:

Claims 1 and 14 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,785,226 (Oltman et al.). Claim 11 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Oltman et al.

Oltman et al. disclose a system and method for data routing over a network. VLANS are used to assist with rerouting of data communication traffic in the event of a communication link failure and to aid in isolating customer network data from unauthorized viewing. Oltman et al. resolve the problem of infinite loop transmission by deploying IP or other OSI layer three routers at strategically located points in the network.

Oltman et al. do not disclose assigning a new network circuit to a data-stitching network element, determining that the new network circuit is assigned a VLAN that was previously assigned an existing network circuit, or running spanning tree on a data-stitch created by the new network circuit, as set forth in claim 1.

In rejecting claim 1, the Examiner refers to col. 11, lines 46-48 and 58-63, and col. 10, lines 6-7 of the Oltman et al. patent. The section of the patent cited at col. 11 discusses rerouting data to an access router after a fault is detected. During a fault condition, data is placed on a different VLAN than used prior to detecting the fault. The VLANs were already in place prior to the fault, the traffic is simply rerouted in a direction opposite to that employed under normal network conditions. The Oltman patent further describes how a switch detects a loop and breaks the loop by disabling a link. If a failure occurs in one of the enabled links, the switch re-enables the disabled

link to establish communication between devices and the rest of the node. The switch uses spanning tree protocol to re-establish communication following failure in the enabled link.

Applicants' invention is particularly advantageous in that it prevents an intersecting set of VLANs network topology. This type of topology makes it difficult or impossible to run a standard spanning tree protocol in order to prevent layer-2 loops. As set forth in claim 1, applicants assign a new network circuit to a data-stitching element and runs spanning tree on a data-stitch circuit created by the new network circuit. As described in the specification, a data-stitching circuit is a matrix within the network element. Using this matrix, the data circuit can be stitched together in the event that one or more interface cards within the network element becomes inoperable. Applicants' invention is thus directed to preventing loops within a data-stitching network element. In contrast to applicants' invention, Oltman et al. simply describe how to detect a loop and break the loop by disabling one of the existing links. Spanning tree protocol is used to re-establish communication if the enabled link becomes disabled. Oltman et al. do not disclose assigning a new network circuit to a data-stitching network element or running spanning tree on a data-stitch created by the new network circuit.

Accordingly, claim 1 is submitted as not anticipated by Oltman et al.

Claims 2 and 3 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Oltman et al. in view of U.S. Patent No. 6,781,953 (Naouri). As discussed further below, Naouri does not remedy the deficiencies of Oltman et al. Claims 2 and 3, which depend either directly or indirectly from claim 1, are also submitted as patentable for the reasons discussed with respect to claim 1.

Claim 14 is submitted as not anticipated by Oltman et al. for the reasons discussed above with respect to claim 1. Claim 14 is further submitted as patentable over Oltman et al., because they do not disclose means for determining that a VLAN

assigned to a new circuit was previously assigned to an existing circuit and means for running spanning tree on a data-stitch created by the new network circuit, if the network element is a data-stitching network element. Oltman et al. do not address data-stitching elements or circuits. Oltman et al. work with networks in an existing ring configuration and switch between links in the case of a detected loop or a failure in one of the existing links or circuits.

Claim 11 is directed to a computer program embodied on a computer readable medium for preventing a layer-2 forwarding loop within a data-stitching network element and is submitted as nonobvious over Oltman et al. for the reasons discussed above with respect to claim 1.

Claims 18 and 25 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,781,953 (Naouri). Claim 24 stands rejected under 35 U.S.C. as being unpatentable over Naouri.

The Naouri patent is directed to a broadcast protocol for local area networks. The invention provides a method for forwarding broadcast frames in a full-mesh-topology network, which method does not require blocking links. The method is designed for forwarding broadcast frames in a network which includes loops.

Claims 18 and 24 have been amended to clarify that the method includes determining that the other circuit that uses a VLAN, which the removed circuit was assigned to, had spanning tree run thereon. This limitation is set forth in allowed claim 4. Accordingly, claims 18 and 24 are submitted as patentable over Naouri. Claim 25, depending directly from claim 24, is also submitted as patentable over Naouri and the other prior art of record.

IV. Conclusion:

For the foregoing reasons, Applicants believe that all of the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite prosecution of the application, please do not hesitate to call the undersigned at (408) 399-5608.

Respectfully submitted,



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